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## ИЗУЧЕНИЕ ИНОСТРАННОГО ЯЗЫКА И ИКТ: ВЗАИМОСВЯЗЬ ВОЗРАСТА ОБУЧАЕМЫХ И СТЕПЕНИ ИСПОЛЬЗОВАНИЯ ИКТ

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*Информационные и коммуникационные технологии (ИКТ), будучи движущей силой почти во всех сферах современной жизни, стали интегративной частью процесса изучения иностранного языка. Интернет-технологии чаще используются в социальной и профессиональной сферах деятельности, например, в изучении иностранного языка. В силу развлекательного характера использование компьютера вообще и использование компьютера, в частности, при изучении иностранного языка в аудиторной деятельности может оказать положительное влияние на мотивацию учащихся к обучению, особенно на мотивацию тех, кто проявляет интерес к информационным и коммуникационным технологиям. Принимая во внимание потенциальную мотивирующую силу используемых технологий, мы предприняли попытку исследовать отношение учащихся различных возрастных групп к использованию технологий в целом и особенно в контексте изучения иностранного языка. Задачи исследования: изучить мотивацию к использованию технологий, частоту и форму их использования, убежденность обучаемых в необходимости использования ИКТ в изучении иностранного языка и влияние использования ИКТ на усиление мотивации к изучению иностранного языка.*

*Группа респондентов представлена школьниками старших классов, студентами университета и обучающимися в возрасте старше 30 лет. Данные собирались посредством анкетирования и анализировались с использованием программы SPSS. Результаты подтвердили значимую зависимость отношения обучающихся к применению информационно-коммуникационных технологий от возрастного фактора респондентов, положительное влияние ИКТ на усвоение иностранного языка и на усиление мотивации к его изучению.*

**Ключевые слова:** *возрастная разница, мотивация учащегося, убежденность обучаемых, интернет-технологии, использование компьютера при изучении иностранного языка.*

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## FOREIGN LANGUAGE LEARNING AND TECHNOLOGY: DIFFERENCES IN LEARNERS' PERSPECTIVE AND BELIEFS IN RELATION TO THE AGE FACTOR

### Abstract

*Being a driving force in almost every aspect of contemporary life, information technologies have become an integral part of the foreign language (FL) learning process. Computer-mediated communication (CMC) tools are being more frequently used for social and professional activities, such as language learning. Due to their entertainment aspect, both the general use of computer and the use of computer assisted language learning (CALL) in the classroom could exert a beneficial effect on learners' motivation to learn, especially for those learners expressing interest in technology. Taking into account the potential motivational power of technology use, this research attempts to explore the difference displayed across various age groups in relation to technology use in general, and especially in the FL learning context. More specifically, the research seeks to examine the motivation in using technology, the frequency and form of technology use, learner beliefs about computer use in FL learning, and the effect of its use on learner motivation to invest effort in learning.*

*The sample included high school learners, learners at the university level and learners over 30 years of age. The data was collected by means of a questionnaire which had been adapted to the needs of students, i.e. various age groups, and analyzed using the SPSS software. The results confirmed the strong significant effect of the age-related factor on learner attitudes toward technology use, its application, and potentially beneficial impact on FL learning as well as on its motivational power in the FL learning context.*

### Keywords

*Age-related differences, learner motivation, learner beliefs, computer-mediated communication (CMC), computer assisted language learning (CALL).*

### Introduction

The advancements in using the information and communication technologies (ICT) have been a driving force in almost every aspect of contemporary life. One of these aspects is education, where ICT have become ubiquitous due to their ability to connect various educational technologies, different forms of knowledge, and varied places of learning [1]. In their paper,

Dudeney and Hockly [2] give evidence on how technology developments had an impact on the foreign language (FL) materials and consequently on FL teaching and learning practice (e.g. developing websites for teachers). Since teachers' task is to help students in their language learning, they need to adapt their teaching to their students' needs and abilities which have changed with time. Sometimes, this is more challenging for teachers



than learners since teachers need to get acquainted with using technology in classroom [3] and then use it in the most efficient way [4]. The changes in students' needs and abilities are stated by Prensky [5] who emphasizes that students that are taught today are different from previous generations because of their contact with technology since their birth and therefore he refers to them as 'digital natives' – they all share a common trait: they are "native speakers of the digital language" [5, p. 1]. It is their knowledge of the digital language that enables them to use various computer-mediated communication (CMC) tools for social and professional activities and respectively, to use technologies in an easier and more spontaneous way [6].

Today ICT have become an integral part of the FL learning process and language education needs to accommodate CMC tools and their use [7]. A recent study in Croatia [8] confirmed that there is great potential for stimulating the learning process on the basis of students' positive attitudes regarding the use of computer assisted language learning (CALL) in the classroom. Using different CMC tools and e-learning platforms is a part of the integrative CALL approach [9] based on multimedia computers and the Internet as hypermedia resources. In short, using various CMC tools allows students to choose from various types of learning that they have at their disposal. When meaningfully used with a true interactional component, computer use can both support and promote language learning [10], [11]. Some excellent examples of using CMC in classroom are mentioned in [12]. In general, technology, if used accordingly in the curriculum, could enable more contact with the language the person is learning [13].

How does all of this affect students and their motivation? It is logical to assume that those learners who are more familiar with technology would be more interested in and therefore

motivated for using technologies in their learning. The same could be applied to teachers – the more familiar they are with technology, the more ready they would be to use it in the classroom. Technologies do offer the possibility to increase motivation for learning but with regard to few factors: firstly, on how effective their usage is, and secondly, on the teachers' readiness to implement technology use in their classrooms as well as the support by the learning institution to use technologies at the level that would be at least equal to the learners' level (since there is a chance they are more proficient users than their teachers) [14].

### **Aim of the research**

The more frequent use of technology by the students has encouraged teachers and learning professionals to implement it into their teaching materials and lessons. Taking into account the previously mentioned literature on using technology and its potential motivational power, this research focuses on the possible difference displayed across various age groups (studying levels) in relation to technology use in general, and especially in a FL learning context. Moreover, it attempts to gain an insight into the frequency and form of technology use, learner beliefs about computer use in FL learning, and the effect of its use on learner motivation to invest effort in learning.

### **Methodology**

The research has been conducted in 2015. The sample included participants learning English as a foreign language at three different levels of education in two different cities in Croatia (Koprivnica and Varaždin): high school learners (14–18 years of age, with an average of almost 11 years of learning English), learners at the university level (18–30 years of age, with an average of 9 years of learning English), and adult

learners (over 30 years of age, with an average of almost 5 years of learning English) (Table 1). For the purposes of this paper and data overview in

tables, the groups of learners have been named as follows: Group 1 (high school learners); Group 2 (university learners); Group 3 (adult learners).

Table 1.

Descriptive statistics of the sample

Learners / L		High school / 1	University / 2	Adults / 3
Number		62	71	56
Gender	Men (N)	16	17	50
	Women (N)	46	48	4
Years of learning		M = 10.74	M = 8.98	M = 4.64

The data was collected by means of an anonymous questionnaire adapted to the needs of learners, i.e. various age groups, and based on the questionnaire originally designed by Spitzberg [15] to measure CMC competence (Cronbach's Alpha = .756). As such, it enabled collecting data about technology preferences of the learners with regard to frequency and form, their beliefs about using technology for language learning, and the effect of its use on learner motivation to invest effort in learning. The obtained data was analyzed using the statistical software package SPSS applying the corresponding metrics.

## Results and discussion

Having the technical restrictions and the purpose of the paper in mind, only the data that presented statistically significant differences will be focused on and the descriptive results of the obtained data will be presented in the text.

First, the authors wanted to see how the results differed within the aforementioned three groups of learners with regard to general CMC competence, the frequency of using the CMC tools (such as e-mail, chat, instant messaging, etc.), and how comfortable they felt when using them for general purposes (Table 2).

Table 2.

Variance analysis for CMC (general competence, tools, comfortableness)

	CMC general competence					Use of CMC tools					Feeling of comfort when using CMC tools				
	SS	d.f.	MS	F	Sig.	SS	d.f.	MS	F	Sig.	SS	d.f.	MS	F	Sig.
<b>L</b>	437,895	2	218,948	12,290	,000*	1206,484	2	603,242	35,428	,000*	785,518	2	392,759	11,121	,000*
<b>1 - 2</b>					,106					,010*					,797
<b>1 - 3</b>					,021*					,000*					,002*
<b>2 - 3</b>					,000*					,000*					,000*

Statistically significant difference was noticed between adult learners and the other two age groups, with adult learners displaying a lower competence (M = 33,46; SD = 4,71) than high school learners (M = 35,64; SD = 4,02) and

university learners (M = 37,21; SD = 3,95) respectively. When it comes to the frequency of using the CMC tools, statistically significant differences were obtained with regard to university learners (M = 25,08; SD = 3,80) who

use more CMC tools than the other two groups, whereas high school learners ( $M = 22,85$ ;  $SD = 3,77$ ) use more CMC tools than adult learners ( $M = 18,85$ ;  $SD = 4,82$ ). Regarding the feeling of comfort when using CMC tools, statistically significant difference was observed between adult learners ( $M = 22,76$ ;  $SD = 6,88$ ) and the other two groups (university students:  $M = 27,70$ ;  $SD = 5,12$  and high school learners:  $M = 26,98$ ;  $SD = 5,94$ ) with the adult group feeling the least comfortable when using the CMC tools.

When it comes to the differences regarding the frequency of use of particular CMC tools, statistically significant differences were noticed between the following groups and CMC tools: university learners ( $M = 4,01$ ;  $SD = ,949$ ) use e-mail more frequently compared to high school learners ( $M = 2,73$ ;  $SD = ,961$ ); adult learners ( $M = 3,75$ ;  $SD = 1,014$ ) use e-mail more frequently than high school learners; university learners ( $M = 4,55$ ;  $SD = ,891$ ) and high school learners ( $M = 4,34$ ;  $SD = ,964$ ) use chat more when compared to adult learners ( $M = 2,54$ ;  $SD = 1,307$ ); university learners ( $M = 4,01$ ;  $SD = 1,021$ ) and high school learners ( $M = 4,00$ ;  $SD = 1,008$ ) use instant messaging more than adult learners ( $M = 2,98$ ;  $SD = 1,328$ ); university learners ( $M = 4,23$ ;  $SD = ,974$ ) and high school learners ( $M = 4,18$ ;  $SD = ,859$ ) use text messaging (SMS) more when compared to adult learners ( $M = 3,64$ ;  $SD = 1,197$ ); university learners

( $M = 4,14$ ;  $SD = 1,175$ ) and high school learners ( $M = 4,06$ ;  $SD = 1,084$ ) use social networking more than adult learners ( $M = 2,21$ ;  $SD = 1,187$ ); university learners ( $M = 1,97$ ;  $SD = 1,230$ ) use weblogs more than high school learners ( $M = 1,24$ ;  $SD = ,803$ ).

When observing the differences regarding the feeling of comfort when using particular CMC tools, the following statistically significant differences were obtained: university learners ( $M = 4,00$ ;  $SD = ,948$ ) feel more comfortable when using e-mail in comparison with high school learners ( $M = 3,44$ ;  $SD = 1,310$ ); university learners ( $M = 4,41$ ;  $SD = ,904$ ) and high school learners ( $M = 4,07$ ;  $SD = 1,014$ ) feel more comfortable when using chat when compared to adult learners ( $M = 3,11$ ;  $SD = 1,383$ ); university learners ( $M = 4,01$ ;  $SD = 1,115$ ) and high school learners ( $M = 4,08$ ;  $SD = 1,100$ ) feel more comfortable when using instant messaging than adult learners ( $M = 3,24$ ;  $SD = 1,181$ ); university learners ( $M = 3,99$ ;  $SD = 1,102$ ) and high school learners ( $M = 4,00$ ;  $SD = 1,058$ ) feel more comfortable when using social networking than adult learners ( $M = 2,58$ ;  $SD = 1,298$ ).

Based on the aforementioned information, it can be noticed that there is a connection between the frequency of use and the feeling of comfort during the use of CMC tools (Table 3).

Table 3.

### Results of the variance analysis for the frequency of use of CMC tools (FR) and the feeling of comfort (CO)

	E-mail		Chat		Instant messaging		SMS		Social networking		Forum		MMO games		Weblog	
L	FR	CO	FR	CO	FR	CO	FR	CO	FR	CO	FR	CO	FR	CO	FR	CO
1 - 2	,000*	,013*	,538	,205	,997	,942	,964	,435	,930	,998	,137	,899	,949	,107	,000*	,609
1 - 3	,000*	,109	,000*	,000*	,000*	,000*	,018*	,936	,000*	,000*	,524	,802	,373	,006*	,132	,989
2 - 3	,317*	,762	,188	,000*	,000*	,001*	,006*	,267	,000*	,000*	,740	,972	,214	,410	,171	,539



In relation to using technology for academic purposes, a statistically significant difference was noticed between the university learners ( $M = 14,47$ ;  $SD = 2,88$ ) and adult learners ( $M = 12,33$ ;  $SD = 3,83$ ) – university learners use technology for academic purposes more frequently ( $p/Sig. = ,012^*$ ). Regarding the use of specific CMC tools for academic purposes, university learners and adult learners mostly use laptops whereas high school learners use smartphones. However, there are no statistically significant differences regarding the CMC tool used for academic purposes between the three groups.

When it comes to their beliefs regarding the importance of using technology for academic purposes, the following statistically significant differences have been noticed between the groups and CMC tools: university learners when compared to adult learners believe that using a PC for academic purposes is more important ( $p/Sig. = ,019^*$ ); using a laptop for academic purposes is more important for university learners when compared both to adult learners ( $p/Sig. = ,018^*$ ) and high school learners ( $p/Sig. = ,000^*$ ); using a smartphone for academic purposes is more important for university learners when compared to adult learners ( $p/Sig. = ,031^*$ ) and for high school learners when compared to adults ( $p/Sig. = ,000^*$ ).

As far as the teaching in general is concerned, there are statistically significant differences with regard to the importance of using technology in teaching. The university learners ( $M = 15,17$ ;  $SD = 6,18$ ) attach more importance to using technology in teaching than both the high school learners ( $M = 12,56$ ;  $SD = 2,36$ ) ( $p/Sig. = ,002^*$ ) and adult learners ( $M = 12,81$ ;  $SD = 2,07$ ) ( $p/Sig. = ,009^*$ ).

The learners were also asked which forms of communication they consider useful when communicating with various people and for

various purposes. Facebook is considered to be the most useful form of communication by high school learners when they communicate with their peers and friends as well as for distance learning while e-mail was chosen as the most useful form when communicating with a teacher.

University learners consider Facebook and chat as most useful when they communicate with their peers and email when they communicate with their teacher; Facebook is seen as the most preferable form for communicating with friends, and Moodle as the most useful when it comes to distance learning.

Adult learners find phone conversations most useful when communicating with their peers; when communicating with their teacher, they choose personal interaction; e-mails are considered to be the most useful form of communication with friends as well as for distance learning.

It is also worth mentioning that there is a statistically significant difference with regard to using Facebook as a means of communication about the teaching content with peers and the teacher – both high school learners ( $M = ,95$ ;  $SD = ,216$ ) and university learners ( $M = 1,00$ ;  $SD = ,000$ ) have a more positive attitude than adult learners ( $M = ,43$ ;  $SD = ,499$ ) ( $p/Sig. = ,000^*$ ).

When it comes to using technology in the classroom, statistically significant differences have been noticed between high school and adult learners ( $p/Sig. = ,012^*$ ) and university and adult learners ( $p/Sig. = ,039^*$ ), with university learners ( $M = 15,50$ ;  $SD = 2,93$ ) having the most and adult learners ( $M = 14,19$ ;  $SD = 2,38$ ) the least positive attitude toward using technology in the classroom.

Finally, when the participants were asked about their attitudes toward e-learning, statistically significant differences were obtained between adult learners and high school learners – adult learners would rather follow the



English language course fully as an e-course ( $p/\text{Sig.} = ,003^*$ ), and they are more ready to work on weekly assignments online ( $p/\text{Sig.} = 0,45^*$ ). University students have a more positive attitude toward studying and passing the exams without the obligation of physical presence in the classroom when compared to adult learners ( $p/\text{Sig.} = ,010^*$ ) and high school learners ( $p/\text{Sig.} = ,013^*$ ). Moreover, they have a more positive attitude toward the quality of distance learning than high school and adult learners ( $p/\text{Sig.} = ,000^*$ ). They also have a more positive attitude than high school learners ( $p/\text{Sig.} = ,035^*$ ) and adult learners ( $p/\text{Sig.} = ,020^*$ ) toward developing the speaking skills via e-learning.

To sum up, the presented results show that younger people believe to have a higher CMC competence and use CMC tools more frequently. Consistent with the presented finding is the observation that the feeling of comfort when using CMC tools is the least present among adult learners. Furthermore, the differences regarding the type of the CMC tool used were also noted; e.g. the younger the learners are, the less likely are they to use e-mails in their communication. On the other hand, adult learners do not make use of chat, instant messaging or text messaging in comparison to university and high school learners which might be the reason why they do not feel so comfortable using them. According to the results, smartphones are useful for academic purposes. When it comes to using technology in the

classroom, both high school and university learners have a more positive attitude than adult learners with university learners attaching more importance to it than the other two groups probably because they use it more frequently for academic purposes. The results also suggest that Facebook is a favorite communication tool of a younger generation with peers and friends, whereas adults still rely on the (older) more personal forms of communication. Nevertheless, according to the obtained data, adult learners are ready to tackle technologies and follow an online course, if possible.

### Conclusion

This study tried to demonstrate that the learner's age influences both the amount as well as the forms of technology used in the classroom. The results confirmed a significant effect of the age-related factor on learner attitudes toward technology use, its application and potentially beneficial impact on FL learning as well as on its motivational power in the FL learning context. It has also showed that even though adult learners use less technology in learning, they are still motivated to make use of online teaching. It would be interesting to conduct a research on a larger sample by including the elementary school learners. Moreover, the results might differ within other regions/countries since the availability of CMC tools and the Internet is not the same everywhere.

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